INITIAL DEMONSTRATION OF CAPABILITY
Unknown Analysis - Data Summary

Method	EPA 353.2 R2.0 ATP 2-013-1-H	Analyte	Nitrite
SOP Number/Revision	353_2AQ2ATP R1.0	Date Completed	09/12/11

Instrument Name and Model Number	Seal Discrete Analyzer AQ2 S/N 090756
Instrument Software (version)	Revision 4.3.2
Reason for Study	Initial Demonstration of Capability
Source of Calibration Standards (Name/Lot #)	W840 Prepared from W519
Quality Control Sample (Name/Lot #)	W620 Prepared from W533
Source of Unknown (Name/Lot#)	ERA QTA 081911B
Date Unknown was Made	09/12/11
Date Sample and Quality Control was Digested	N/A
Date of Analysis	09/12/11

Replicate	Results	True Value	Percent Recovery	Acceptance Limits
Unknown	1.24	1.23	100.8%	1.04 – 1.41 (Proficiency Water Study)

Quality Control Recovery (% REC) = C_S / TV * 100

Where,

C_S = Result from quality control sample.

TV = Known value of analyte concentration.

I the undersigned, Certify that:

1) The analyst identified below, using the cited test method (s), which is in use at the facility for the analysis of samples , have met the Initial Demonstration of Capability.
2) The analyst identified on this certification performed the test method (s).
3) A copy of the test method (s) and the laboratory specific Standard Operating Procedures (SOP) are available for all personnel on site.
4) The data associated with the Demonstration of Capability are true, accurate, and complete and self-explanatory. All raw data necessary to reconstruct and validate these analyses have been retained at the facility, and that the associated information is well-organized and available for review by authorized assessors. This includes all Certificates of Analysis associated with the Demonstration of Capability.

Analyst 10-18-11

HHR Program Manager – Environmental Chemistry

HHR Program Manager – Quality Control Coordinator 11-1-11

AQ2 Tray Report

Serial Number:	090756
Software Version:	4.3.2
Report Requested By:	Gregory Young GY
Date & Time:	09/12/2011 15:27:04
Tray Number:	4
Tray Name:	11.09.12 (13-26)

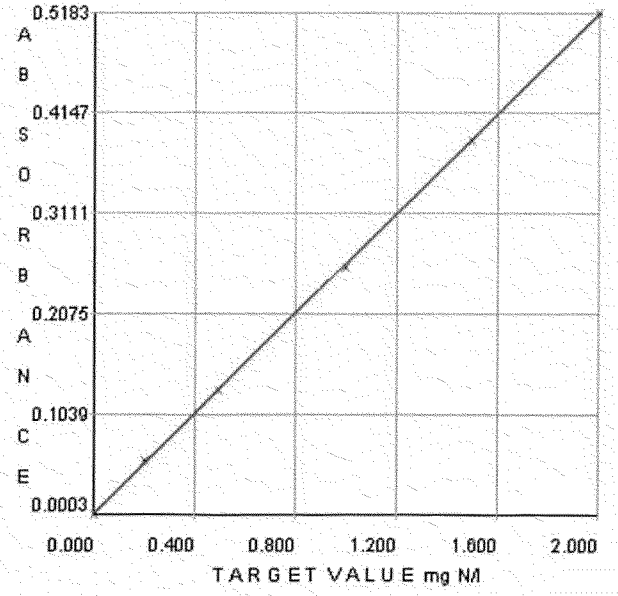
Nitrite

Calibration Chart

Type	Observed	Calculated	Target	% Error
S1	0.0003	-0.0057	0.0000	
S90	0.0570	0.2148	0.2000	7.4143
S91	0.1298	0.4980	0.5000	-0.4091
S92	0.2566	0.9909	1.0000	-0.9096
S93	0.3859	1.4936	1.5000	-0.4278
S94	0.5183	2.0084	2.0000	0.4195
S0	0.0012	-0.0020	0.0000	

Polynomial Order:	1
Correlation Coefficient:	0.9999
Carryover:	0.2
Date & Time:	09/12/2011 14:22:41

Calibration Graph



Reagents

Name	Batch	Prepared By	Expiry Date
NO2 NEDD	W862	Gregory Young	10/08/2011 22:00:00
NO2 BUFFER	W791	Gregory Young	12/02/2011 21:00:00

Test Results

Cup	Type	ID	Result	Units	Test Dil.	Cup Dil.	User	Time/Date
	S1	STANDARD 1	0.0003				GWY	09/12/2011 14:15:12
	S90	STANDARD 90	0.0570				GWY	09/12/2011 14:16:27
	S91	STANDARD 91	0.1298				GWY	09/12/2011 14:17:42
	S92	STANDARD 92	0.2566				GWY	09/12/2011 14:18:56
	S93	STANDARD 93	0.3859				GWY	09/12/2011 14:20:11
	S94	STANDARD 94	0.5183				GWY	09/12/2011 14:21:26
	S0	STANDARD 0	0.0012				GWY	09/12/2011 14:22:41
3	ICV	ICV	0.9862	mg N/l			GWY	09/12/2011 14:23:57
4	ICB	ICB	-0.0038	mg N/l			GWY	09/12/2011 14:25:12
5	U1	LFB	0.9991	mg N/l			GWY	09/12/2011 14:26:27
6	U2	LRB	-0.0043	mg N/l			GWY	09/12/2011 14:27:43
7	U3	MRL	0.1932	mg N/l			GWY	09/12/2011 14:28:36
8	U4	W620 QCS	1.5761	mg N/l			GWY	09/12/2011 14:29:29
9	U5	W11001322-02	1.2375	mg N/l			GWY	09/12/2011 14:30:21
10	U6	W11001322-02 SPK	2.1583ALT	mg N/l		x2.0000	GWY	09/12/2011 14:31:14
11	U7	W11001322-02 DUP	2.1529ALT	mg N/l		x2.0000	GWY	09/12/2011 14:32:07
12	CCV	CCV	0.9622	mg N/l			GWY	09/12/2011 14:32:59
13	CCB	CCB	-0.0081	mg N/l			GWY	09/12/2011 14:33:52

98.6%Re
99.9%Re
96.6%Re
94.9%Re
92.1%Re
0.2%RPD
96.2%Re

Potassium Nitrite, Crystal

`BAKER ANALYZED`® A.C.S. Reagent

Product No. 3202
Lot No. H43593
Release Date 11/05/2009

Certificate of Analysis

TEST	SPECIFICATION	RESULT
Exceeds A.C.S. Specifications		
Meets Reagent Specifications for testing USP/NF monographs		
Assay (KNO_2) (by $KMnO_4$ titrn)	96.0 % min.	98.5 %
Insoluble Matter	0.01 % max.	< 0.001 %
pH of 5% Solution at 25°C	7.0 - 10.0	8.1
Chloride (Cl)	0.02 % max.	< 0.02 %
Sulfate (SO_4)	0.01 % max.	< 0.005 %
Calcium (Ca)	0.005 % max.	0.0006 %
Heavy Metals (as Pb)	0.001 % max.	< 0.001 %
Iron (Fe)	0.001 % max.	< 0.0005 %
Sodium (Na)	0.5 % max.	0.4 %
Magnesium (Mg)	0.002 % max.	0.0002 %
For Laboratory, Research or Manufacturing Use		
Country of Origin: JAPAN		

ISO Phillipsburg, NJ 9001:2008 & 14001:2004
Paris, FR 9001:2000
Mexico City, Mexico 9001:2000
Daventer, Holland 9001:2008 & 14001:2004
Selangor, Malaysia 9001:2000

Thomas M. Baker
Chairman & Chief Executive Officer

For questions on this Certificate of Analysis please contact Technical Services at 1-800-582-2537 or 908-859-2151
Mallinckrodt Baker, Inc. • 222 Red School Lane • Phillipsburg, NJ 08865 • Phone: 908.859.2151 • Fax: 908.859.6905

In -House Lot #: W519
CoA/MSDS Filed: Yes / Yes
Date Received: 2-24-10
Date Opened: —
Expiration Date: NONE GIVEN

ERA

A Waters Company

In -House Lot #: W533
CoA/MSDS Filed: Yes/Yes
Date Received: 2-10-10
Date Opened:
Expiration Date: 12/2012

Certificate of Analysis

Lot No. 191209

PotableWatR™ Nitrite

Catalog No. 695
Issue Date: December 31, 2009
Revision Date: Original

Certification

Parameter	Certified Value [1] (mg/l)	Uncertainty [2]	QC PALs™ [3] (mg/l)	PT PALs™ [4] (mg/l)
nitrite as N	1.66	3.0%	1.46 - 1.86	1.41 - 1.91

Analytical Verification

	Round Robin Data [5]			NIST Traceability	
Parameter	Mean (mg/l)	Recovery (%)	n	SRM Number	Recovery (%)
nitrite as N	1.63	98.0%	5	SRM not available	-

Please see footnotes on back

6000 West 54th Ave. Arvada, CO 80002 800-372-0122 fax: 303-421-0159 www.eraqc.com

ERA

A Waters Company

1. The **Certified Value** is the actual "made-to" concentration confirmed by ERA analytical verification.

2. The stated **Uncertainty** is the total propagated uncertainty at the 95% confidence interval. The uncertainty is based on the preparation and internal analytical verification of the product by ERA, multiplied by a coverage factor which is equal to the Student t factor at a 95% confidence interval at n-1 degrees of freedom. The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product.

3. The **QC Performance Acceptance Limits (QC PALs™)** are based on actual historical data collected in ERA's Proficiency Testing program. The **QC PALs™** reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the **QC PALs™** to realistically evaluate your performance against your peers.

4. The **PT Performance Acceptance Limits (PT PALs™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the **PT PALs™** when analyzing this QC standard alongside USEPA and NELAC compliant PT standards. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and, therefore, the acceptance limits of this QC standard and any PT standard may differ relative to their difference in concentrations.

5. The **Analytical Verification** data include the mean value, percent recovery and number of data points reported by the laboratories in our Proficiency Testing study compared to the Certified Values. In addition, where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed.

Traceability Recovery (%) = [(% recovery certified standard)/(% recovery NIST SRM)]*100

The traceability data shown were compiled by analyzing the ERA standards or their associated stock solutions against the applicable NIST SRMs.

6. This standard **expires 12/2012.** The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or email to info@eraqc.com.

Certifying Officer: Tom Widera

081911B 2009 TNI Evaluation Final Complete Report

A Waters Company

Gregory Young
DHHR Program Manager I
West Virginia Department of Health
4710 Chimney Dr, Suite G
Environmental Chemistry Lab
Charleston, WV 25302
(304) 965-2694 X 2222

EPA ID: WV00003
ERA Customer Number: W213401

NELAC Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
WS Inorganics (cat# 698) Study Dates: 08/19/11 - 09/16/11												
1505	Alkalinity as CaCO3	mg/L		101	90.9 - 111	Not Reported				98.4	3.44	
1575	Chloride	mg/L		17.8	15.4 - 20.4	Not Reported				17.7	1.05	
1610	Conductivity at 25°C	µmhos/cm		467	420 - 514	Not Reported				464	11.3	
1730	Fluoride	mg/L	2.96	3.05	2.74 - 3.36	Acceptable	SM4500F- C 18th ED 1992	9/12/2011	-0.687	3.04	0.122	
1820	Nitrate + Nitrite as N	mg/L	9.10	8.96	8.06 - 9.86	Acceptable	EPA-126-A Revision 5	9/15/2011	0.841	8.86	0.286	
1810	Nitrate as N	mg/L	9.09	8.96	8.06 - 9.86	Acceptable	EPA-126-A Revision 5	9/15/2011	0.540	8.88	0.395	
1125	Potassium	mg/L		31.3	27.0 - 35.4	Not Reported				30.9	1.75	
2000	Sulfate	mg/L		55.8	48.4 - 62.7	Not Reported				55.5	2.15	
1955	Total Dissolved Solids at 180°C	mg/L		386	248 - 524	Not Reported				386	16.6	
WS Nitrite (cat# 695) Study Dates: 08/19/11 - 09/16/11												
1840	Nitrite as N	mg/L	1.24	1.23	1.04 - 1.41	Acceptable	2-013-1-H	9/12/2011	0.223	1.23	0.0543	

All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01